

Microprocessor Based Thermohygrometer/Datalogger Model THM - 2002 FL

Description



The microprocessor based, pocket size thermohygrometer model THM-2002 FL is designed to precise measurement and recording temperature and humidity. Its easy routine maintenance, small size and battery supply provides an excellent comfort of recording and wide application in scientific research, environment measurement, food industry and many others.

The THM - 2002FL logger is also equipped with internal nonvolatile memory enabling to record up to 50 000 records at intervals ranging from 1 minute to 99 hours. Results recorded in the internal memory might be transferred to the computer PC directly connected to the THM - 2002FL's RS-232 output. In the field operation a **portable, battery powered printer can be directly connected** to the THM - 2002FL thermohygrometer. The user can select chart or graphs printout using a thermohygrometer's keyboard.

This sophisticated thermohygrometer covers temperature range from **-25°C to +60°C** with resolution 0,01°C and humidity range from 5% do 95%RH with resolution 0,5%RH.

Higher accuracies, grater than typical electronic thermohygrometers are achieved through a unique linearising technique.

Application of the internal microprocessor ensure a minimal measuring error and a large alphanumeric easy-to-read LCD display enable simply read-out of results. Nonvolatile memory stores setup conditions (RS-232, log interval, probe calibration) and also user's setting seleted from the keyboard.

The meter also includes a real time clock which shows time, day, month and year. The meter accepts a 4 wire Pt - 100 probe, which allows to apply probes with very long cable (up to 10 meters). Humidity measurement is done by thin film sensor. The THM - 2002FL features a quick disconnect panel input for

a probe. During the process of recording, the thermohygrometer of the logger allows read-out with 0,01°C resolution of the current temperature and the current humidity with resolution 0,5%RH and also minimal and maximal temperatures as well as humidity that were in the measuring area between switching on and off the meter.

Technical data.

Temperature sensor :	Platinum Pt - 100 probe (4 wire)
Relative humidity sensor:	Thin film capacitance sensor
Temperature range:	-25°C to +60°C
Resolution of current temperature:	0,01°C
Resolution of the min/max temperature :	0,01°C
Accuraccy of temperature measurement:	± 0,15% of the range
Humidity range:	5%RH to 95%RH
Resolution of current humidity :	0,5%RH
Resolution of the min/max humidity:	0,5%RH
Accuracy of relative humidity measurement:	±3%RH @ temperature of calibration point
Humidity calibration (done by manufacturer):	in climatic chamber
Temperature and humidity display :	4 x 16 alphanumeric LCD display
Temperature probe calibration:	automatic matching at 0°C
Log interval:	from 1 minute to 99 hours (programmable through the meter's keyboard)
Start/End of the logging :	through the meter's keyboard
Data logging:	
- storing in the nonvolatile, internal memory and further transferable to the PC and/or to the portable printer with the time and date stamp as a chart of graphs	
- on-line output to the PC through RS-232 serial interface for further analysis, storage and hard copy printouts	
Digital output:	RS - 232 serial interface output
Internal memory:	up to 50 000 records
Power:	4 x 1,5 V batteries
Housing:	black plastic
Dimensions:	146 x 82 x 39 mm